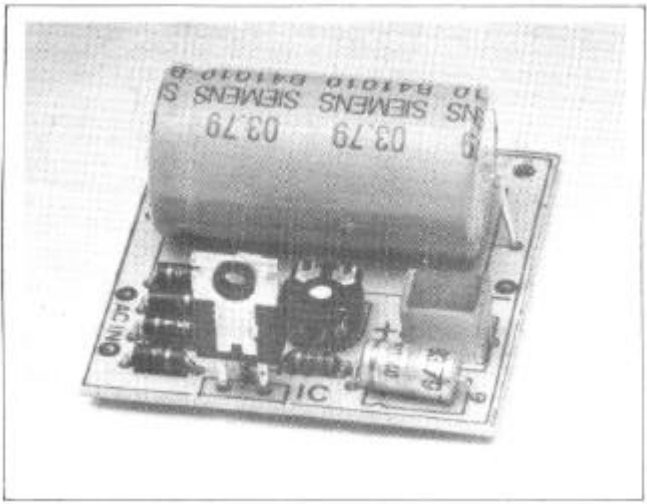
velleman·kit HIGH-Q

1.5 A POWER SUPPLY

K1823

- Adjustable from 1.2V to 35V
- Line regulation 0.01 %
- Load regulation 0.1 %
- 80dB ripple rejection
- Short circuit, thermal and overload protected
- Complete with rectifiers and capacitors, no transformer



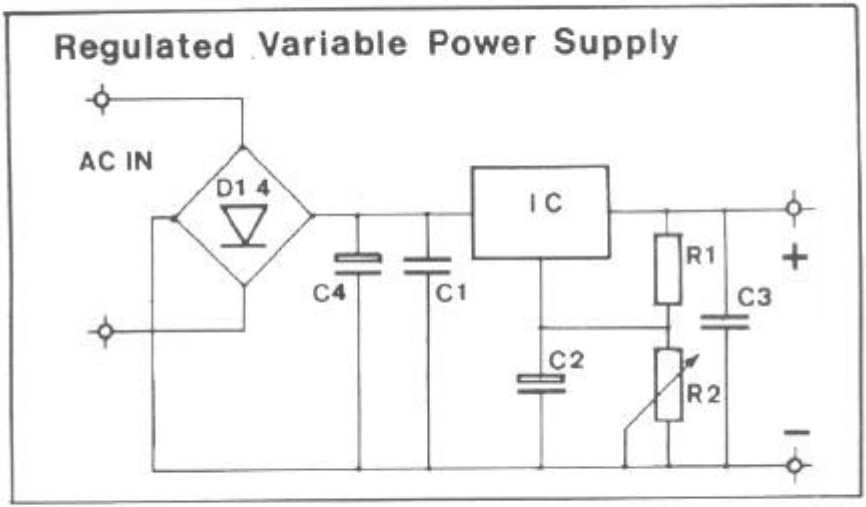
1.5 A POWER SUPPLY

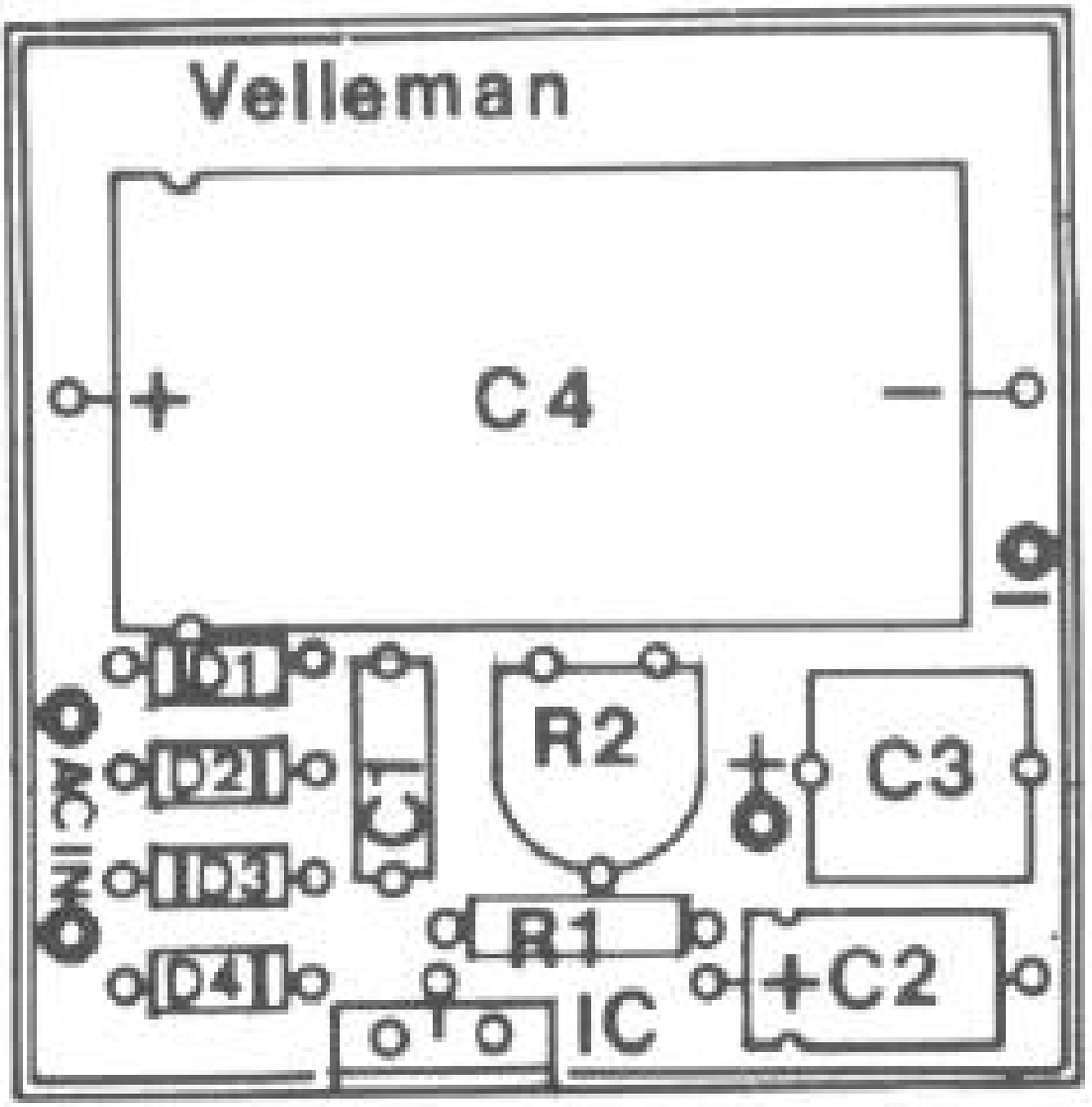
This kit is based on the LM317 type integrated circuit. This IC is a "floating" voltage regulator capable to deliver more than 1.5 AMP, for a voltage range adjustable between 1.2 and 35 V.
Apart from this particulary, this new IC has a remarkable better ripple and regulation properties than the known standard regulators. There is also a current limiter inside this IC, and a thermal overload protection and a safe area protection.

Technical data :
- Adjustable output : from 1.2 through 35 V
- Output current : 1 Amp
- Line regulation : typically 0.01 %
- Load regulation : typically 0.1 %
- 100 % electrical burn in
- 80 dB ripple rejection

Construction :
First of all we have to note that, to get all the current from this kit, the IC must be cooled and is to be fixed, in one or the other manner, to the frame of the housing. But pay attention ! The IC must be completely insulated from the housing.
o-Mount the four rectifiers diodes 1N4004 or 5, 6, 7, marked on the print as D1, D2, D3 and D4. Check for the correct polarity.
o-Mount C1, MKM condenser of 0.1 uF.
o-Mount C2, electrolytic condenser of 10 uF. Check for the correct polarity.
o-Mount C3, 1 uF MKM condenser.
o-Mount C4, electrolytic condenser of 2200 uF. Check for the correct polarity.
o-Mount R1, 120 Ohm resistor (brown-red-brown).
o-Mount R2, 4K7 trimmer.
o-Mount the IC LM317 as shown on the diagram. It has not to be cooled if used for small powers.
28 VAC maximum is allowed for the inputvoltage.

Regulated Variable Power Supply




Velleman
C4
+
—
D1
D2
D3
D4
C1
R2
C3
R1
+C2
IC